



## SEQUENCE LISTING

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GEDULIN, BRONISLAVA

<120> METHODS FOR GLUCAGON SUPPRESSION

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<141> 2001-07-13

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<151> 1999-01-14

<150> 60/132,017  
<151> 1999-04-30

<150> 60/175,365  
<151> 2000-01-10

<160> 239

<170> FastSEQ for Windows Version 4.0  
Microsoft Word 97

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<213> Heloderma Horridum

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 1  
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 2  
<211> 39  
<212> PRT  
<213> Heloderma Suspectum

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 2  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
Page 1

20

25

30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 3

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<400> 3

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 4

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (30)

<223> Gly in position 30 is amidated

<400> 4

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 5

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (30)

<223> AMIDATION, Position 30 is Gly-NH2

<400> 5

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 6

<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (28)  
<223> AMIDATION, Position 28 is Asn-NH2

<400> 6  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

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<211> 39  
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (30)  
<223> AMIDATION, Position 30 is Gly-NH2

<400> 7  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 8  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (28)  
<223> AMIDATION, Position 28 is Asn-NH2

<400> 8  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 9  
<211> 28  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (28)  
<223> AMIDATION, Position 28 is Asn-NH2

<400> 9  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Val Arg Leu Ala Ile Glu Phe Leu Lys Asn  
20 25

<210> 10  
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<223> Description of Artificial Sequence: Synthetic Construct

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<223> AMIDATION, Position 39 is Ser-NH2

<400> 10  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 11  
<211> 39  
<212> PRT  
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<220>  
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<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 11  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 12

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 12

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 13

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 13

Tyr Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 14

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<213> Artificial Sequence

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<220>  
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<222> (39)  
<223> AMIDATION, Position 39 is Tyr-NH2

<400> 14  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Tyr  
35

<210> 15  
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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 15  
His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 16  
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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa is naphthylalanine

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 16  
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 17

<211> 39

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 17

His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 18

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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 18

His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 19

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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 19

His Gly Glu Gly Thr Phe Thr Thr Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 20

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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 20

His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 21

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<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<220>

<221> VARIANT

<222> (10)

<223> Xaa is pentylglycine

<400> 21

His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 22  
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<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa is pentylglycine

<400> 22  
His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 23  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa is pentylglycine

<400> 23  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 24  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa is pentylglycine

<400> 24  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 25  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Postion 39 is Ser-NH2

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa is naphthalalanine

<400> 25  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 26  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 26  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
Page 10

1               5               10               15  
Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20              25              30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 27  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 27  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1               5              10              15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20              25              30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 28  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 28  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1               5              10              15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20              25              30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 29  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is tertiary-butylglycine

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 29  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 30  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 30  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 31  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 31  
His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser

20

25

30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 32

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is thioproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36,37 and 38 is thioproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 32

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 33

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is thioproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 33

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 34  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is homoproline

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa at positions 36, 37, and 38 is homoproline

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 34  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 35  
<211> 39  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa at positions 36, 37, and 38 is homoproline

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 35  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 36

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is thioproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36,37, and 38 is thioproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 36

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 37

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is homoproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36,37, and 38 is homoproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 37

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 38

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is N-methylalanine

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37 and 38 is N-methylalanine

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 38

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 39

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 39

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 40

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is N-methylalanine

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 40

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 41

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa at position 1 is His, Arg or Tyr

<220>

<221> VARIANT

<222> (2)

<223> Xaa at position 2 is Ser, Gly Ala, or Thr

<220>

<221> VARIANT

<222> (3)

<223> Xaa at position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa at position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa at position 6 is Ala, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa at position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa at position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa at position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, Ile, Val,  
pentylglycine, or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa at position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Ala, Leu, Ile,  
pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (15)  
<223> Xaa at position 15 is Ala or Glu

<220>  
<221> VARIANT  
<222> (16)..(17)  
<223> Xaa at position 16 and 17 is Ala or Glu

<220>

<221> VARIANT  
<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa at position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Ala, Phe, Tyr, or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu,  
pentylglycine, tert-butylglycine, or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu, or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Ala or Lys

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn and is optionally  
amidated

<220>  
<221> VARIANT  
<222> (29)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and if present is optionally amidated

<220>

<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (33)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (34)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa at position 36 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (37)  
<223> Xaa at position 37 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (38)  
<223> Xaa at position 38 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<400> 41  
Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 42  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa at position 1 is His, Arg, Tyr, Ala,  
norvaline, Val, or norleucine

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa at position 2 is Ser, Gly, Ala, or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa at position 3 is Ala, Asp, or Glu

<220>  
<221> VARIANT  
<222> (4)  
<223> Xaa at position 4 is Ala, norvaline, Val,  
norleucine or Gly

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa at position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa at position 6 is Phe, Tyr, or naphtylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa at position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa at position 8 is Ala, Ser, or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa at position 9 is Ala, norvaline, norleucine,  
Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, Ile, Val,  
pentylglycine, or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa at position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Ala, Leu, Ile,  
pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa at positions 15, 16, and 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa at position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe, Tyr or napthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu,  
pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or  
napthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Ala or Lys

<220>

<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn

<220>  
<221> VARIANT  
<222> (29)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (33)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (34)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (37)  
<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (38)  
<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (39)

<223> Xaa at position 39 is Ser, Tyr or absent and is optionally amidated

<400> 42

Xaa  
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 43

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa at position 1 is His or Arg

<220>

<221> VARIANT

<222> (2)

<223> Xaa at position 2 is Gly or Ala

<220>

<221> VARIANT

<222> (3)

<223> Xaa at position 3 is Asp or Glu

<220>

<221> VARIANT

<222> (5)

<223> Xaa at position 5 is Ala or Thr

<220>

<221> VARIANT

<222> (6)

<223> Xaa at position 6 is Ala, Phe, or naphtylalanine

<220>

<221> VARIANT

<222> (7)

<223> Xaa at position 7 is Ser, or Thr

<220>

<221> VARIANT

<222> (8)

<223> Xaa at position 8 is Ala, Ser, or Thr

<220>

<221> VARIANT

<222> (9)

<223> Xaa at position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, or pentylglycine

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa at position 13 Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Ala, Leu or pentylglycine

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa at positions 15, 16, and 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa at position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe or naphtylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val or  
tert-butylglycine

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)

<223> Xaa at position 25 is Ala, Trp or Phe

<220>

<221> VARIANT

<222> (26)

<223> Xaa at position 26 is Ala or Leu

<220>

<221> VARIANT

<222> (27)

<223> Xaa at position is Ala or Lys

<220>

<221> VARIANT

<222> (28)

<223> Xaa at position 28 is Ala or Asn

<220>

<221> VARIANT

<222> (29)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (30)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>

<221> VARIANT

<222> (32)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (33)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (34)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (35)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (36)

<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<400> 43

Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Ala Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 44

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 is His or Ala

<220>

<221> VARIANT

<222> (2)

<223> Xaa in position 2 is Gly or Ala

<220>

<221> VARIANT

<222> (3)

<223> Xaa in position 3 is Ala, Asp or Glu

<220>

<221> VARIANT

<222> (4)

<223> Xaa in position 4 is Ala or Gly

<220>

<221> VARIANT

<222> (5)

<223> Xaa in position 5 is Ala or Thr

<220>

<221> VARIANT

<222> (6)

<223> Xaa in position 6 is Phe or naphthylalanine

<220>

<221> VARIANT

<222> (7)  
<223> Xaa in position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Ala, Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Ala, Leu or pentylglycine

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa in position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Met or pentylglycine

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe or naphylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val or  
tert-butylglycine

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp or Phe

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Ala or Lys

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn

<220>  
<221> VARIANT  
<222> (29)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (33)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (34)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (37)  
<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (38)  
<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (39)  
<223> may be absent and is optionally amidated

<400> 44  
Xaa  
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 45  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 is His, Arg, Tyr or 4-imidazopropionyl

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa in positon 2 is Ser, Gly, Ala or Thr

<220>

<221> VARIANT  
<222> (3)  
<223> Xaa in position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa in position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Ala, Phe, Tyr or naphylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 8 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Ala, Leu, Ile, Val, pentylglycine or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa in position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Ile, pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 is Ala or Glu

<220>  
<221> VARIANT

<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala, Leu, Lys-NH3-R where R is Lys, Arg, C1-C10 straight chain or branched alkanoyl or cycloalkanoyl

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr, or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Lys, Asn, Ala, Lys-NH-epsilon-R where R is Lys, Arg, C1-C10 straight chain or branched alkanoyl or cycloalkylalkanoyl and is optionally amidated

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Lys, Asn, Ala, Lys-NH-epsilon-R where R is Lys, Arg, C1-C10 straight chain or branched alkanoyl or cycloalkylalkanoyl and is optionally amidated

<220>  
<221> VARIANT  
<222> (29)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (33)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (34)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (37)  
<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (38)  
<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated

<400> 45  
Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 46  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 is His, Arg, Tyr, Ala,  
norvaline, Val norleucine, or 4-imidazopropionyl

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa in position 2 is Ser, Gly, Ala, or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa in position 3 is Ala, Asp, or Glu

<220>  
<221> VARIANT  
<222> (4)  
<223> Xaa in position 4 is Ala, norvaline, Val,  
norleucine or Gly

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa in position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Phe, Tyr or naphylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Ala, Norvaline, Val,  
Norleucine, Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Ala, Leu, Ile, Val  
pentylglycine or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa in position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Ile, pentylglycine  
Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 stands for Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala, Leu or Lys-NH<sub>3</sub> where R  
is Lys, Arg, C1-C10 straight chain or branched  
alkanoyl or cycloalleyl-alkanoyl

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu, pentylglycine,  
tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr

or naphthylalanine

- <220>
  - <221> VARIANT
  - <222> (26)
  - <223> Xaa at position 26 is Ala or Leu
- 
- <220>
  - <221> VARIANT
  - <222> (27)
  - <223> Xaa at position 27 is Lys, Asn, Ala, Lys-NH-epsilon-R where R is Lys, Arg, C1-C10 straight chain or branched alkanoyl or cycloalkylalkanoyl and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (28)
  - <223> Xaa at position 28 is Lys, Asn, Ala, Lys-NH-epsilon-R where R is Lys, Arg, C1-C10 straight chain or branched alkanoyl or cycloalkylalkanoyl and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (29)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (30)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (31)
  - <223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (32)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (33)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (34)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (35)
  - <223> may be absent and is optionally amidated
- 
- <220>
  - <221> VARIANT
  - <222> (36)
  - <223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline

N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (37)  
<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (38)  
<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (39)  
<223> Xaa at position 39 is Ser, Tyr or absent and is optionally  
amidated

<400> 46  
Xaa  
1 5 10 15  
Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30  
Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 47  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 is His, Arg or Thr

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa in position 2 is Ser, Gly, Ala, or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa in position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Phe, Tyr or naphthalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Leu, Ile, Val, pentylglycine or Met

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Leu, Ile, pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa in position 24 is Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa in position 25 is Trp, Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 is independently Pro, homoproline, 3-hydroxyproline, 4-hydroxyproline, thioproline, N-alkylglycine, N-alkylpentylglycine or N-alkylalanine

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa in positions 36, 37 & 38 is independently Pro, homoproline, 3-hydroxyproline, 4-hydroxyproline, thioproline, N-alkylglycine, N-alkylpentylglycine

or N-alkylalanine

<220>  
<221> VARIANT  
<222> (39)  
<223> Xaa in position 39 is Ser, Thr or Tyr and is  
optionally amidated

<400> 47  
Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser  
20 25 30  
Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 48  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 is His, Arg, Tyr or  
4-imidazopropionyl

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa in position 2 is Ser, Gly, Ala or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa in position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (7)..(8)  
<223> Xaa in positions 7 & 8 is Thr or Ser

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Leu, Ile, Val, pentylglycine

or Met

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Leu, Ile, pentylglycine,  
Val or Met

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 is Ile, Val, Lu, pentylglycine,  
tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa in position 24 is Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa in position 25 is Trp, Phe, Tyr, or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Lys, Asn, Ala, Lys-NH-epsilon-R  
where R is Lys, Arg, C1-C10 straight chain or  
branched alkanoyl or cycloalkylalkanoyl

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Lys, Asn, Ala, Lys-NH-epsilon-R  
where R is Lys, Arg, C1-C10 straight chain or  
branched alkanoyl or cycloalkylalkanoyl

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa in positions 36-38 is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT

<222> (39)  
<223> Xaa in position 39 is Ser, Thr or Tyr and is optionally amidated

<400> 48  
Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Xaa Xaa Xaa Leu Xaa Xaa Gly Gly Xaa Ser  
20 25 30  
Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 49  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 49  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 50  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 50  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 51  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 51

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 52

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 52

His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 53

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 53

His Gly Glu Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 54

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 54  
His Gly Glu Gly Thr Ala Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 55  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 55  
His Gly Glu Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 56  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 56  
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 57  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 57  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 58  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 58  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 59  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 59  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 60  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 60  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 61  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 61  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 62  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 62  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 63  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 63

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 64

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 64

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 65

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 65

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 66

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 66

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 67

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 67

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Ala Phe Leu Lys Asn  
20 25

<210> 68

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 68

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
20 25

<210> 69

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 69

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn  
20 25

<210> 70

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 70

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn  
20 25

<210> 71

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Ala in position 28 is amidated

<400> 71

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala  
20 25

<210> 72

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (38)

<223> Pro in position 38 is amidated

<400> 72  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro  
35

<210> 73  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (38)  
<223> Pro in position 38 is amidated

<400> 73  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro  
35

<210> 74  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (37)  
<223> Pro in position 37 is amidated

<400> 74  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro  
35

<210> 75  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (37)

<223> Pro in position 37 is amidated

<400> 75

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro  
35

<210> 76

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (36)

<223> Pro in position 36 is amidated

<400> 76

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro  
35

<210> 77

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (36)

<223> Pro in position 36 is amidated

<400> 77

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro

35

<210> 78  
<211> 35  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (35)  
<223> Ala in position 35 is amidated

<400> 78  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala  
35

<210> 79  
<211> 35  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (35)  
<223> Ala in position 35 is amidated

<400> 79  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala  
35

<210> 80  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (34)  
<223> Gly in position 34 is amidated

<400> 80  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly

<210> 81  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (34)  
<223> Gly in position 34 is amidated

<400> 81  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly

<210> 82  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (33)  
<223> Ser in position 33 is amidated

<400> 82  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 83  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (33)

<223> Ser in position 33 is amidated

<400> 83

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 84

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (32)

<223> Ser in position 32 is amidated

<400> 84

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 85

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (32)

<223> Ser in position 32 is amidated

<400> 85

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 86

<211> 31

<212> PRT

<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (31)  
<223> Pro in position 31 is amidated

<400> 86  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 87  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (31)  
<223> Pro in position 31 is amidated

<400> 87  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 88  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 88  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly  
20 25 30

<210> 89  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 89  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
20 25

<210> 90  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 90  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly  
20 25

<210> 91  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 is tPro

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa in positions 36-38 is tPro

<220>  
<221> AMIDATION  
<222> (38)  
<223> tPro in postion 38 is amidated

<400> 91  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 92

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (36)...(38)

<223> Xaa in positions 36-38 is tPro

<220>

<221> AMIDATION

<222> (38)

<223> tPro in position 38 is amidated

<400> 92

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 93

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (31)

<223> Xaa in position 31 stands for Nme

<220>

<221> AMIDATION

<222> (37)

<223> Pro in position 37 is amidated

<400> 93

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Pro Pro

<210> 94  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 is Nme

<220>  
<221> VARIANT  
<222> (36)..(37)  
<223> Xaa in positions 36-37 is Nme

<220>  
<221> AMIDATION  
<222> (37)  
<223> Nme in position 37 is amidated

<400> 94  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 95  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 stands for hPro

<220>  
<221> VARIANT  
<222> (36)..(37)  
<223> Xaa in positions 36-37 stands for hPro

<220>  
<221> AMIDATION  
<222> (37)  
<223> hPro in position 37 is amidated

<400> 95  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 96  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 stands for hPro

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa in position 36 stands for hPro

<220>  
<221> AMIDATION  
<222> (36)  
<223> hPro in position 36 is amidated

<400> 96  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa  
35

<210> 97  
<211> 35  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (35)  
<223> Ala in position 35 is amidated

<400> 97  
Arg Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 98  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 98  
His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 99  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 stands for naph

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 99  
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 100  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 100  
His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu

1

5

10

15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 101

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 101

His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 102

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 102

His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Ala Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 103

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (10)

<223> Xaa in position 10 stands for pGly

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 103

His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 104

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (22)

<223> Xaa in position 22 stands for naph

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 104

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn  
20 25

<210> 105

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (23)

<223> Xaa in position 23 stands for tBug

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 105

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn  
20 25

<210> 106

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 106

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn  
20 25

<210> 107

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (33)

<223> Ser in position 33 is amidated

<400> 107

His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 108

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (29)

<223> Gly in position 29 is amidated

<400> 108

His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
20 25

<210> 109

<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 stands for hPro

<220>  
<221> VARIANT  
<222> (36)..(37)  
<223> Xaa in positions 36-37 stands for hPro

<220>  
<221> AMIDATION  
<222> (37)  
<223> hPro in position 37 is amidated

<400> 109  
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30  
  
Ser Gly Ala Xaa Xaa  
35

<210> 110  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Asn in position 27 is amidated

<400> 110  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn  
20 25

<210> 111  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Asn in position 27 is amidated

<400> 111  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn  
20 25

<210> 112  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 112  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly  
20 25

<210> 113  
<211> 29  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 113  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly  
20 25

<210> 114  
<211> 27  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Lys-NH(epsilon) octanoyl in position 27 is amidated

<400> 114  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa  
20 25

<210> 115  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Lys-NH(epsilon) octanoyl in position 27 is amidated

<400> 115  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa  
20 25

<210> 116  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 116  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa Gly Gly  
20 25

<210> 117  
<211> 29  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for 4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 117  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu Glu  
1 5 10 15  
Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa Gly Gly  
20 25

<210> 118  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 118  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 119  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 119  
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 120  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 120  
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 121  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 121  
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 122  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 122

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 123

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 123

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 124

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 124

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 125

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 125

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 126

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 126

His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 127

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 127

Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 128

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 128  
Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 129

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 129

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 130

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 130

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 131

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 131  
Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 132

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 132

Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 133

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (6)

<223> Xaa in position 6 stands for Nala

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 133

Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 134

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 stands for Nala

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 134  
Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 135  
<211> 28  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 135  
Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 136  
<211> 28  
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<213> Artificial sequence

<220>  
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Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 136  
Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 137  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 137

Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 138

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 138

Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 139

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 139

Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 140

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Page 74

Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 140  
Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 141  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 141  
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 142  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 142  
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 143  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 143  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 144  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 144  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 145  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 stands for Pgly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 145  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 146  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 stands for Pgly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 146  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 147  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 147  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 148  
<211> 28  
<212> PRT  
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<220>  
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Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 148  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 149  
<211> 28  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 149  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 150  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 150  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 151  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 151  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 152

<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 152  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 153  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 153  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 154  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 154  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 155  
<211> 28

<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 stands for pGly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 155  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 156  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 stands for pGly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 156  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 157  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 157  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Ala Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 158  
<211> 28  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 158  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 159  
<211> 28  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 159  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ala  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 160  
<211> 28  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 160  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 161

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 161

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 162

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 162

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 163

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 163

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 164  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 164  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 165  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 165  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 166  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 166  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
Page 83

1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 167

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 167

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 168

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 168

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 169

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (22)

<223> Xaa in position 22 stands for Nala

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 169

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Asn  
20 25

<210> 170

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (22)

<223> Xaa in position 22 stands for Nala

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 170

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn  
20 25

<210> 171

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (28)

<223> Asn in position 28 is amidated

<400> 171

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn  
20 25

<210> 172

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 172  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn  
20 25

<210> 173  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 stands for tGly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 173  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn  
20 25

<210> 174  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 stands for tGly

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 174  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Asn  
20 25

<210> 175  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 175  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn  
20 25

<210> 176  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 176  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn  
20 25

<210> 177  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 177  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
20 25

<210> 178  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 178  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
20 25

<210> 179  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 179  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Ala Lys Asn  
20 25

<210> 180  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 180  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn  
20 25

<210> 181

<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 181  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Ala Asn  
20 25

<210> 182  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 182  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn  
20 25

<210> 183  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Ala in position 28 is amidated

<400> 183  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Ala  
20 25

<210> 184  
<211> 28

<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (28)  
<223> Ala in position 28 is amidated

<400> 184  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala  
20 25

<210> 185  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (38)  
<223> Pro in position 38 is amidated

<400> 185  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro  
35

<210> 186  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (38)  
<223> Pro in position 38 is amidated

<400> 186  
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro  
35

<210> 187  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (37)  
<223> Pro in position 37 is amidated

<400> 187  
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro  
35

<210> 188  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (36)  
<223> Pro in position 36 is amidated

<400> 188  
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro  
35

<210> 189  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (36)  
<223> Pro in position 36 is amidated

<400> 189  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu

1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro  
35

<210> 190

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (35)

<223> Ala in position 35 is amidated

<400> 190

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 191

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (35)

<223> Ala in position 35 is amidated

<400> 191

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 192

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (34)  
<223> Gly in position 34 is amidated

<400> 192  
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly

<210> 193  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (33)  
<223> Ser in position 33 is amidated

<400> 193  
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 194  
<211> 32  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (32)  
<223> Ser in position 32 is amidated

<400> 194  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 195  
<211> 32  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (32)

<223> Ser in position 32 is amidated

<400> 195

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 196

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (31)

<223> Pro in position 31 is amidated

<400> 196

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 197

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>

<221> AMIDATION

<222> (30)

<223> Gly in position 30 is amidated

<400> 197

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly  
20 25 30

<210> 198

<211> 29

<212> PRT

<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 198  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly  
20 25

<210> 199  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 stands for tPro

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa in positions 36-38 stands for tPro

<220>  
<221> AMIDATION  
<222> (38)  
<223> tPro in position 38 is amidated

<400> 199  
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30  
  
Ser Gly Ala Xaa Xaa Xaa  
35

<210> 200  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (36)..(38)

<223> Xaa in positions 36-38 stands for tPro

<220>

<221> AMIDATION

<222> (38)

<223> tPro in position 38 is amidated

<400> 200

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 201

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (31)

<223> Xaa in position 31 stands for Nme

<220>

<221> VARIANT

<222> (36)..(37)

<223> Xaa in positions 36-37 stands for Nme

<220>

<221> AMIDATION

<222> (37)

<223> Nme in position 37 is amidated

<400> 201

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 202

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (31)

<223> Xaa in position 31 stands for hPro

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa in position 36 stands for hPro

<220>  
<221> AMIDATION  
<222> (36)  
<223> hPro in position 36 is amidated

<400> 202  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa  
35

<210> 203  
<211> 35  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (35)  
<223> Ala in position 35 is amidated

<400> 203  
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 204  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 204  
His Gly Asp Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly

20

25

30

<210> 205

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 205

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 206

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 206

Ala Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 207

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 stands for  
4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Asn in position 27 is amidated

<400> 207  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15  
Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn  
20 25

<210> 208  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for  
4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (27)  
<223> Asn in position 27 is amidated

<400> 208  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu  
1 5 10 15  
Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn  
20 25

<210> 209  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for

4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 209  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly  
20 25

<210> 210  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for  
4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa in position 26 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 210  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly  
20 25

<210> 211  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for

4-Imidazolylpropionyl-Gly

<220>

<221> VARIANT

<222> (27)

<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>

<221> AMIDATION

<222> (27)

<223> Lys-NH(epsilon) octanoyl in position 27 is amidated

<400> 211

Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu  
1               5               10               15

Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa  
20               25

<210> 212

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 stands for  
4-Imidazolylpropionyl-Gly

<220>

<221> VARIANT

<222> (27)

<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>

<221> AMIDATION

<222> (27)

<223> Lys-NH(epsilon) octanoyl

<400> 212

Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu  
1               5               10               15

Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa  
20               25

<210> 213

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> VARIANT

<222> (1)

<223> Xaa in positon 1 stands for

4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 213  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa Gly Gly  
20 25

<210> 214  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 stands for  
4-Imidazolylpropionyl-Gly

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (29)  
<223> Gly in position 29 is amidated

<400> 214  
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu  
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa Gly Gly  
20 25

<210> 215  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 215  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn  
20 25

<210> 216  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (28)  
<223> Asn in position 28 is amidated

<400> 216  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn  
20 25

<210> 217  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 217  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly  
20 25 30

<210> 218  
<211> 30  
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<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa in position 27 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 218  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly  
20 25 30

<210> 219  
<211> 28  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa in position 28 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (28)  
<223> Lys-NH(epsilon) octanoyl in position 28 is amidated

<400> 219  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa  
20 25

<210> 220  
<211> 28  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> VARIANT

<222> (28)  
<223> Xaa in position 28 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (28)  
<223> Lys-NH(epsilon) octanoyl in position 28 is amidated

<400> 220  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa  
20 25

<210> 221  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
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<223> Xaa in position 28 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 221  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa Gly Gly  
20 25 30

<210> 222  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa in position 28 stands for Lys-NH(epsilon) octanoyl

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated

<400> 222  
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa Gly Gly  
20 25 30

<210> 223

<211> 39

<212> PRT

<213> Artificial Sequence

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Amino Acid Sequence

<220>

<221> MOD\_RES

<222> (12)

<223> Lys-PEG

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 223

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 224

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

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Amino Acid Sequence

<220>

<221> MOD\_RES

<222> (27)

<223> Lys-PEG

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 224

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 225

<211> 39  
<212> PRT  
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<220>  
<221> MOD\_RES  
<222> (2)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 225  
His Lys Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 226  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (5)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 226  
His Gly Glu Gly Lys Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 227  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 227  
His Gly Glu Gly Thr Phe Thr Lys Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 228  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (10)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 228  
His Gly Glu Gly Thr Phe Thr Ser Asp Lys Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 229  
<211> 39  
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<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (11)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 229  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Lys Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 230  
<211> 39  
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Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (13)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 230  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Lys Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 231  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (16)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 231  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Lys  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 232  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (17)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 232  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Lys Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 233  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (19)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)

<223> Ser in position 39 is amidated

<400> 233

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Lys Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 234

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>

<221> MOD\_RES

<222> (21)

<223> Lys-PEG

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 234

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Lys Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 235

<211> 39

<212> PRT

<213> Artificial Sequence

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Amino Acid Sequence

<220>

<221> MOD\_RES

<222> (24)

<223> Lys-PEG

<220>

<221> AMIDATION

<222> (39)

<223> Ser in position 39 is amidated

<400> 235

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu

1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Lys Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 236  
<211> 39  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
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<222> (25)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 236  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Lys Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 237  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (28)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 237  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 238  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (29)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 238  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Lys Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 239  
<211> 39  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> MOD\_RES  
<222> (30)  
<223> Lys-PEG

<220>  
<221> AMIDATION  
<222> (39)  
<223> Ser in position 39 is amidated

<400> 239  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Lys Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35



SEQUENCE LISTING

<110> AMYLIN PHARMACEUTICALS, INC. YOUNG, ANDREW  
GEDULIN, BRONISLAVA

<120> METHODS FOR GLUCAGON SUPPRESSION

<130> 030639.0031.UTL (249/167 US)

<140> 09/889,331

<141> 2001-07-13

<150> PCT/US00/00942

<151> 2000-01-14

<150> 60/116,380

<151> 1999-01-14

<150> 60/132,017

<151> 1999-04-30

<150> 60/175,365

<151> 2000-01-10

<150> 60/116,380

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Microsoft Word 97

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<213> Heloderma Horridum

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<222> (39)

<223> Ser in position 39 is amidated

<400> 1

His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 2

<211> 39

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<213> Heloderma Suspectum

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
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<210> 40  
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Construct

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is N-methylalanine

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 40  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 41  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa at position 1 is His, Arg or Tyr

<220>  
<221> VARIANT

<222> (2)  
<223> Xaa at position 2 is Ser, Gly Ala, or Thr

<220>  
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<222> (3)  
<223> Xaa at position 3 is Asp or Glu

<220>  
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<222> (5)  
<223> Xaa at position 5 is Ala or Thr

<220>  
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<222> (6)  
<223> Xaa at position 6 is Ala, Phe, Tyr or  
napthylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa at position 7 is Thr or Ser

<220>  
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<222> (8)  
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<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa at position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, Ile, Val,  
pentylglycine, or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
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<220>  
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<223> Xaa at position 14 is Ala, Leu, Ile,  
pentylglycine, Val or Met

<220>  
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<222> (15)  
<223> Xaa at position 15 is Ala or Glu

<220>  
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<222> (16)..(17)  
<223> Xaa at position 16 and 17 is Ala or Glu

<220>  
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<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa at position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Ala, Phe, Tyr, or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu,  
pentylglycine, tert-butylglycine, or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu, or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
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<223> Xaa at position 27 is Ala or Lys

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn and is optionally amidated

<220>  
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<222> (29)

<223> may be absent and if present is optionally amidated

<220>  
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<223> may be absent and if present is optionally amidated

<220>  
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<223> Xaa at position 29 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>,  
Gly Gly OH, Gly Gly NH<sub>2</sub> and further as in the  
specification 31 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and if present is optionally amidated

<220>  
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<223> may be absent and if present is optionally amidated

<220>  
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<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and if present is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa at position 36 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, thioproline,  
N-alkylalanine or absent and is optionally amidated

<400> 41

Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa

35

<210> 42

<211> 2939

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa at position 1 is His, Arg, Tyr, Ala,  
norvaline, Val, or norleucine

<220>

<221> VARIANT

<222> (2)

<223> Xaa at position 2 is Ser, Gly, Ala, or Thr

<220>

<221> VARIANT

<222> (3)

<223> Xaa at position 3 is Ala, Asp, or Glu

<220>

<221> VARIANT

<222> (4)

<223> Xaa at position 4 is Ala, norvaline, Val,  
norleucine or Gly

<220>

<221> VARIANT

<222> (5)

<223> Xaa at position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa at position 6 is Phe, Tyr, or naphtylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa at position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa at position 8 is Ala, Ser, or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa at position 9 is Ala, norvaline, norleucine,  
Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, Ile, Val,  
pentylglycine, or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
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<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
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<222> (13)  
<223> Xaa at position 13 is Ala or Gln

<220>  
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<223> Xaa at position 14 is Ala, Leu, Ile,  
pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa at positions 15, 16, and 17 is Ala or Glu

<220>  
<221> VARIANT

<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
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<220>  
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<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
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<222> (22)  
<223> Xaa at position 22 is Phe, Tyr or naphtylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu,  
pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or  
naphtylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Ala or Lys

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn

<220>  
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<222> (29)

| <223> may be absent and is optionally amidated

| <220>

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<222> (31)

<223> Xaa at position 29 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>,  
Gly Gly OH, Gly Gly NH<sub>2</sub> and further as indicated  
in the specification 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent

<220>

<221> VARIANT

<222> (32)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (33)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (34)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (35)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (36)

<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (39)

<223> Xaa at position 39 is Ser, Tyr or absent and is optionally

amidated

<400> 42  
Xaa  
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 43  
<211> 2938  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa at position1 is His or Arg

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa at position 2 is Gly or Ala

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa at position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa at position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa at position 6 is Ala, Phe, or napthylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa at position 7 is Ser, or Thr

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa at position 8 is Ala, Ser, or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa at position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa at position 10 is Ala, Leu, or pentylglycine

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa at position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa at position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa at position 13 Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Ala, Leu or pentylglycine

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa at positions 15, 16, and 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa at position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa at position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa at position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe or napthylalanine

<220>

<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val or  
tert-butylglycine

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp or Phe

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Ala or Lys

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is Ala or Asn

<220>  
<221> VARIANT  
<222> (29)

<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 29 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>,  
Gly Gly OH, Gly Gly NH<sub>2</sub>, and further as indicated  
in the specification 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT

<222> (33)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (34)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (35)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (36)

<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<400> 43

Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa

35

<210> 44

<211> 2939

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 is His or Ala

<220>

<221> VARIANT

<222> (2)

<223> Xaa in position 2 is Gly or Ala

<220>

<221> VARIANT

<222> (3)

<223> Xaa in position 3 is Ala, Asp or Glu

<220>

<221> VARIANT

<222> (4)

<223> Xaa in position 4 is Ala or Gly

<220>

<221> VARIANT

<222> (5)

<223> Xaa in position 5 is Ala or Thr

<220>

<221> VARIANT

<222> (6)

<223> Xaa in position 6 is Phe or napthylalanine

<220>

<221> VARIANT

<222> (7)

<223> Xaa in position 7 is Thr or Ser

<220>

<221> VARIANT

<222> (8)

<223> Xaa in position 8 is Ala, Ser or Thr

<220>

<221> VARIANT

<222> (9)

<223> Xaa in position 9 is Ala, Asp or Glu

<220>

<221> VARIANT

<222> (10)

<223> Xaa in position 10 is Ala, Leu or pentylglycine

<220>

<221> VARIANT

<222> (11)

<223> Xaa in position 11 is Ala or Ser

<220>

<221> VARIANT

<222> (12)

<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Met or  
pentylglycine

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala or Leu

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe or naphylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val or  
tert-butylglycine

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp or Phe

<220>  
<221> VARIANT  
<222> (26)

<223> Xaa at position 26 is Ala or Leu

<220>

<221> VARIANT

<222> (27)

<223> Xaa at position 27 is Ala or Lys

<220>

<221> VARIANT

<222> (28)

<223> Xaa at position 28 is Ala or Asn

<220>

<221> VARIANT

<222> (29)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (30)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 29 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>,  
Gly Gly OH, Gly Gly NH<sub>2</sub> and further as indicated  
in the specification

31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline

N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (32)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (33)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (34)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (35)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (36)

<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline

N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (39)

<223> may be absent and is optionally amidated

<400> 44

Xaa  
1 5 10 15

Xaa Ala Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser

35

<210> 45

<211> 2838

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 is His, Arg, Tyr or  
4-imidazopropionyl

<220>

<221> VARIANT

<222> (2)

<223> Xaa in positon 2 is Ser, Gly, Ala or Thr

<220>

<221> VARIANT

<222> (3)

<223> Xaa in position 3 is Asp or Glu

<220>  
<221> VARIANT  
<222> (5)  
<223> Xaa in position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Ala, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 8 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Ala, Leu, Ile, Val,  
pentylglycine or Met ,

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa in position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Ile,  
pentylglycine, Val or Met

<220>  
<221> VARIANT

<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 is Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala, Leu, Lys-NH3-R where R  
is Lys, Arg, C1-C10 straight chain or branched  
alkanoyl or cycloalkanoyl

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr, or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu, pentylglycine,  
tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Lys-, Asn, Asn-Ala, Lys,-NH-epsilon-R  
Lys-NH3-R-Asn, Asn-Lys-NH3-R, Lys-NH3-R-Ala,  
Ala-Lys-NH3-R, where R is Lys, Arg, C1-C10 straight  
or  
branched alkanoyl or cycloalkylalkanoyl\_and is  
optionally amidated

<220>  
<221> VARIANT  
<222> (28)  
<223> Xaa at position 28 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>, Lys, Asn, Ala, Lys-NH-  
epsilon-R  
Gly-Gly OH, Gly-Gly NH<sub>2</sub> and further as indicated  
in the specification  
where R is Lys, Arg, C1-C10 straight chain or  
branched alkanoyl or cycloalkylalkanoyl and is  
optionally amidated

<220>  
<221> VARIANT  
<222> (29)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (30)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT  
<222> (32)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (33)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (34)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (35)  
<223> may be absent and is optionally amidated

<220>  
<221> VARIANT  
<222> (36)  
<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>  
<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<400> 45

Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa

35

<210> 46

<211> 2839

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 is His, Arg, Tyr, Ala,  
norvaline, Val norleucine, or 4-imidazopropionyl

<220>

<221> VARIANT

<222> (2)

<223> Xaa in position 2 is Ser, Gly, Ala, or Thr

<220>

<221> VARIANT

<222> (3)

<223> Xaa in position 3 is Ala, Asp, or Glu

<220>

<221> VARIANT

<222> (4)

<223> Xaa in position 4 is Ala, norvaline, Val,  
norleucine or Gly

<220>

<221> VARIANT  
<222> (5)  
<223> Xaa in position 5 is Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Phe, Tyr or naphtylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Ala, Norvaline, Val,  
Norleucine, Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Ala, Leu, Ile, Val  
pentylglycine or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Xaa in position 11 is Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Xaa in position 12 is Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Xaa in position 13 is Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa in position 14 is Ala, Leu, Ile, pentylglycine  
Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Xaa in positions 15, 16 & 17 stands for Ala or Glu

<220>  
<221> VARIANT  
<222> (19)  
<223> Xaa in position 19 is Ala or Val

<220>  
<221> VARIANT  
<222> (20)  
<223> Xaa in position 20 is Ala or Arg

<220>  
<221> VARIANT  
<222> (21)  
<223> Xaa in position 21 is Ala, Leu or Lys-NH<sub>3</sub> where R  
is Lys, Arg, C1-C10 straight chain or branched  
alkanoyl or cycloalleyl-alkanoyl

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa at position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa at position 23 is Ile, Val, Leu, pentylglycine,  
tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa at position 24 is Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa at position 25 is Ala, Trp, Phe, Tyr  
or naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Xaa at position 26 is Ala or Leu

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa at position 27 is Lys-, Asn, Asn-Ala, Lys,-NH-epsilon-R  
~~Lys-NH<sub>3</sub>-R~~, Asn-Lys-NH<sub>3</sub>-R, Lys-NH<sub>3</sub>-R-Ala,  
Ala-Lys-NH<sub>3</sub>-R, where R is Lys, Arg, C1-C10 straight  
chain  
or  
branched alkanoyl or cycloalkylalkanoyl and is  
optionally amidated

<220>  
<221> VARIANT  
<222> (28)

<223> Xaa at position 28 is OH, NH<sub>2</sub>, Gly OH, Gly NH<sub>2</sub>, Lys, Asn, Ala, Lys-NH-epsilon-R

Gly Gly OH, Gly Gly NH<sub>2</sub> and further as indicated  
in the specification  
where R is Lys, Arg, C1-C10 straight chain or  
branched alkanoyl or cycloalkylalkanoyl and is  
optionally amidated

<220>

<221> VARIANT

<222> (29)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (30)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (32)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (33)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (34)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (35)

<223> may be absent and is optionally amidated

<220>

<221> VARIANT

<222> (36)

<223> Xaa at position 36 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (37)

<223> Xaa at position 37 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent

and is optionally amidated

<220>

<221> VARIANT

<222> (38)

<223> Xaa at position 38 is Pro, homoproline, 3Hyp, 4Hyp, thiproline  
N-alkylglycine, N-alkylpentylglycine N-alkylalanine or absent  
and is optionally amidated

<220>

<221> VARIANT

<222> (39)

<223> Xaa at position 39 is Ser, Tyr or absent and is optionally  
amidated

<400> 46

Xaa  
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 47

<211> 4039

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Construct

<220>

<221> VARIANT

<222> (1)

<223> Xaa in position 1 is His, Arg or Thr

<220>

<221> VARIANT

<222> (2)

<223> Xaa in position 2 is Ser, Gly, Ala, or Thr

<220>

<221> VARIANT

<222> (3)

<223> Xaa in position 3 is Asp or Glu

<220>

<221> VARIANT

<222> (6)

<223> Xaa in position 6 is Phe, Tyr or naphthalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Xaa in position 7 is Thr or Ser

<220>  
<221> VARIANT  
<222> (8)  
<223> Xaa in position 8 is Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Leu, Ile, Val, pentylglycine  
or Met

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Leu, Ile, pentylglycine,  
Val or Met

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 is Ile, Val, Leu,  
pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa in position 24 is Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa in position 25 is Trp, Phe, Tyr or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position 31 is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT  
<222> (36)..(38)  
<223> Xaa in positions 36, 37 & 38 is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT  
<222> (39)  
<223> Xaa in position 39 is Ser, Thr or Tyr  
~~<220> and is~~  
~~<221> VARIANT~~  
<222> (40)  
~~<223> Xaa in position 40 is OH or NH<sub>3</sub>, with the~~  
~~proviso that the compound does not have the~~  
~~formula of either SEQ. ID. NOS. 1 or 2~~  
~~optionally amidated~~

<400> 47  
Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser  
20 25 30  
  
Ser Gly Ala Xaa Xaa Xaa Xaa Xaa  
35 40

<210> 48  
<211> ~~4039~~  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Construct

<220>  
<221> VARIANT  
<222> (1)  
<223> Xaa in position 1 is His, Arg, Tyr or  
4-imidazopropionyl

<220>  
<221> VARIANT  
<222> (2)  
<223> Xaa in position 2 is Ser, Gly, Ala or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Xaa in position 3 is Asp or Glu

<220>

<221> VARIANT  
<222> (6)  
<223> Xaa in position 6 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (7)..(8)  
<223> Xaa in positions 7 & 8 is Thr or Ser

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa in position 9 is Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Xaa in position 10 is Leu, Ile, Val, pentylglycine  
or Met

<220>  
<221> VARIANT  
<222> (14)  
<223> Xaa at position 14 is Leu, Ile, pentylglycine,  
Val or Met

<220>  
<221> VARIANT  
<222> (22)  
<223> Xaa in position 22 is Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Xaa in position 23 is Ile, Val, Lu, pentylglycine,  
tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Xaa in position 24 is Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Xaa in position 25 is Trp, Phe, Tyr, or  
naphthylalanine

<220>  
<221> VARIANT  
<222> (27)  
<223> Xaa is at position 27 is Lys-, Asn-Lys, Ala, Lys-NH<sub>3</sub>-epsilon-R-Asn,  
Asn-Lys-NH<sub>3</sub>-R where R is Lys, Arg, C1-C10 straight chain or  
chain or branched alkanoyl or cycloalkylalkanoyl

<220>

<221> VARIANT  
<222> (3028)  
<223> Xaa at position 28 is Lys, Asn, Ala, Lys-NH-epsilon-R  
where R is Lys, Arg, C1-C10 straight chain or  
branched alkanoyl or cycloalkylalkanoyl

<220>  
<221> VARIANT  
<222> (31)  
<223> Xaa in position is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT  
<222> (3536)..(3938)  
<223> Xaa in positions 3536-3938 is independently Pro,  
homoproline, 3-hydroxyproline, 4-hydroxyproline,  
thioproline, N-alkylglycine, N-alkylpentylglycine  
or N-alkylalanine

<220>  
<221> VARIANT  
<222> (4039)  
<223> Xaa in position 40 is OH or NH<sub>2</sub>, with the proviso 39 is Ser, Thr or Tyr  
and is optionally  
that the compound does not have the formula of  
either SEQ. ID. NOS. 1 or 2  
amidated

<400> 48  
Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Xaa Xaa Gly Gly Xaa Ser Ser  
20 25 30  
Ser Gly Ala Xaa Xaa Xaa Xaa Xaa Xaa  
35 40

<210> 49  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Amino Acid Sequence

<220>  
<221> AMIDATION  
<222> (30)  
<223> Gly in position 30 is amidated